

## **REMARKS**

### **I. Introduction**

With the cancellation of claim 3, claims 1, 2 and 4 to 22 are currently pending in the present application. Applicants respectfully submit that claims 1, 2, and 4 to 22 are patentable for the following reasons.

Applicants thank the Examiner for acknowledging that all copies of the certified copies of the priority documents have been received in the National Stage application from the International Bureau.

Applicants thank the Examiner for acknowledging the receipt of the Information Disclosure Statement, PTO 1449 and references cited therein.

### **II. Rejection of Claims 1 to 10, 12 to 14 and 19 Under 35 U.S.C. § 103(a)**

Claims 1 to 10, 12 to 14 and 19 were rejected under 35 U.S. C. § 103(a) as being unpatentable over U.S. Patent 6,742,571 ("Yamasaki et al.") in view of U.S. Patent 4,411,121 ("Blacklin et al."). Applicants respectfully submit that the combination of references does not render obvious claims 1 to 10, 12 to 14 and 19 for the following reasons.

Claim 1 relates to a liquid-cooled mold for continuous casting of metals. Claim 1 recites mold plates made of one of copper and a copper alloy, which are connected respectively to one of an adapter plate and a cooling-water tank by clamping bolts. Claim 1 further recites that the clamping bolts are fastened to plateau pedestals projecting from a cooling arrangement side of the mold plate, which jut at least partially into a cooling arrangement gap formed between the mold plates and one of the adapter plate and the cooling-water tank, and have a streamlined shape adjusted to a flow direction of the cooling arrangement. Claim 1 has been amended without prejudice such that each pedestal is configured in a rhombus-shape. Support for the amendment to claim 1 is found in originally filed claim 3.

The Office Action alleges that Yamasaki et al. teach a liquid-cooled mold for continuous casting of metal, wherein the supporting plates to the copper facing plates have cylindrical plateau pedestals. Applicants submit and the Office

Action admits that Yamasaki et al. fail to teach the use of a streamlined shape or rhombus shape for the plateau pedestals.

The addition of Blacklin et al. does not cure the defects of Yamasaki et al. Blacklin et al. relate to structural members with truncated conical portions and composite panels including the same. As provided in Figure 3, dome-like projections 12 are placed in the plane of sheet 10. The projections are positioned, such that an several members together provide a rhombus pattern (as provided in diagrammatic pattern 18). Blacklin et al. do not disclose or suggest that each pedestal is configured in a rhombus shape.

In rejecting a claim under 35 U.S.C. § 103(a), the Examiner bears the initial burden of presenting a prima facie case of obviousness. In re Rijckaert, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993). To establish prima facie obviousness, three criteria must be satisfied. First, there must be some suggestion or motivation to modify or combine reference teachings. In re Fine, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). This teaching or suggestion to make the claimed combination must be found in the prior art and not based on the application disclosure. In re Vaeck, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). Second, there must be a reasonable expectation of success. In re Merck & Co., Inc., 800 F.2d 1091, 231 U.S.P.Q. 375 (Fed. Cir. 1986). Third, the prior art reference(s) must teach or suggest all of the claim limitations. In re Royka, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974). As indicated above, neither Yamasaki et al. nor Blacklin et al. discloses, or even suggests, a configuration wherein each of the pedestals are rhombus shaped. It is therefore respectfully submitted that the combination of references does not render obvious the rejected claims.

Moreover, it is respectfully submitted that the cases of In re Fine, supra, and In re Jones, 21 U.S.P.Q.2d 1941 (Fed. Cir. 1992), make plain that the Office Action's generalized assertions that it would have been obvious to modify or combine the references do not properly support a § 103 rejection. It is respectfully submitted that those cases make plain that the Office Action reflects a subjective "obvious to try" standard, and therefore does not reflect the proper evidence to support an obviousness rejection based on the references relied upon. In particular, the Court in the case of In re Fine stated that:

The PTO has the burden under section 103 to establish a *prima facie* case of obviousness. It can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references. This it has not done. . . .

**Instead, the Examiner relies on hindsight in reaching his obviousness determination. . . . One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.**

In re Fine, 5 U.S.P.Q.2d at 1598 to 1600 (citations omitted; italics in original; emphasis added). Likewise, the Court in the case of In re Jones stated that:

Before the PTO may combine the disclosures of two or more prior art references in order to establish *prima facie* obviousness, there must be some suggestion for doing so, found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. . . .

**Conspicuously missing from this record is any evidence, other than the PTO's speculation (if it be called evidence) that one of ordinary skill . . . would have been motivated to make the modifications . . . necessary to arrive at the claimed [invention].**

In re Jones, 21 U.S.P.Q.2d at 1943, 1944 (citations omitted; italics in original).

That is exactly the case here since it is believed and respectfully submitted that the present Office Action offers no evidence whatsoever, but only conclusory hindsight, reconstruction and speculation, which these cases have indicated does not constitute evidence that will support a proper obviousness finding. Unsupported assertions are not evidence as to why a person having ordinary skill in the art would be motivated to modify or combine references to provide the claimed subject matter of the claims to address the problems met thereby. Accordingly, the Office must provide proper evidence of a motivation for modifying or combining the references to provide the claimed subject matter.

More recently, the Federal Circuit in the case of In re Kotzab has made plain that even if a claim concerns a "technologically simple concept" -- which is not the case here -- there still must be some finding as to the "specific understanding or

principle within the knowledge of a skilled artisan” that would motivate a person having no knowledge of the claimed subject matter to “make the combination in the manner claimed,” stating that:

In this case, the Examiner and the Board fell into the hindsight trap. The idea of a single sensor controlling multiple valves, as opposed to multiple sensors controlling multiple valves, is a technologically simple concept. With this simple concept in mind, the Patent and Trademark Office found prior art statements that in the abstract appeared to suggest the claimed limitation. But, there was no finding as to the specific understanding or principle within the knowledge of a skilled artisan that would have motivated one with no knowledge of Kotzab’s invention to make the combination in the manner claimed. In light of our holding of the absence of a motivation to combine the teachings in Evans, we conclude that the Board did not make out a proper prima facie case of obviousness in rejecting [the] claims . . . under 35 U.S.C. Section 103(a) over Evans.

In re Kotzab, 55 U.S.P.Q.2d 1313, 1318 (Fed. Cir. 2000) (emphasis added). Again, it is believed that there have been no such findings.

Claims 2 , 4 to 10, 12 to 14 and 19 depend from claim 1 and therefore include all of the features of claim 1. Applicants respectfully submit that claims 2, 4 to 10, 12 to 14 and 19 are patentable for at least the reasons provided above in relation to amended claim 1.

### **III. Rejection of Claim 11 Under 35 U.S.C. § 103(a)**

Claim 11 was rejected under 35 U.S. C. § 103(a) as being unpatentable over Yamasaki et al. in view of Blacklin et al. and further in view of U.S. Patent 4,551,187 (“Church et al.”). Applicants respectfully submit that the combination of references does not render obvious claim 11 for the following reasons.

Claim 11 depends from claim 1 and therefore includes all of the features of amended claim 1.

As provided above, Yamasaki et al. and Blacklin et al. do not disclose or suggest that each pedestal is configured in a rhombus shape.

The addition of Church et al. does not cure the defects of Yamasaki et al. and Blacklin et al. Church et al. allegedly relate to a copper alloy. The Office

Action limits the use of Church et al. to allegedly provide an alloy which promotes high temperature creep resistance of molding plates. The Office Action does not allege and Church et al. do not provide for any configuration where each pedestal is configured in a rhombus shape. Applicants respectfully request withdrawal of the rejection to claim 11.

**IV. Rejection of Claims 15 and 18 Under 35 U.S.C. § 103(a)**

Claims 15 and 18 were rejected under 35 U.S. C. § 103(a) as being unpatentable over Yamasaki et al. in view of Blacklin et al. and further in view of U.S. Patent 5,467,810 ("Grove"). Applicants respectfully submit that the combination of references does not render obvious claims 15 and 18 for the following reasons.

Claims 15 and 18 depend from claim 1 and therefore include all of the features of amended claim 1.

As provided above, Yamasaki et al. and Blacklin et al. do not disclose or suggest that each pedestal is configured in a rhombus shape.

The addition of Grove does not cure the defects of Yamasaki et al. and Blacklin et al. Grove allegedly relates to a continuous metal casting mold. The Office Action limits the use of Grove for allegedly providing a sliding aid. Applicants respectfully submit that the Office Action does not allege and Grove does not disclose or suggest and configuration where the pedestal is configured in a rhombus shape.

Applicants respectfully request withdrawal of the rejection to claims 15 and 18.

**V. Rejection of Claims 16 and 17 Under 35 U.S.C. § 103(a)**

Claims 16 and 17 were rejected under 35 U.S. C. § 103(a) as being unpatentable over Yamasaki et al. in view of Blacklin et al. and further in view of U.S. Patent (3,709,286). ("Bower Jr.") Applicants respectfully submit that the combination of references does not render obvious claims 16 and 17 for the following reasons.

Claims 16 and 17 depend from claim 1 and therefore include all of the features of amended claim 1.

As provided above, Yamasaki et al. and Blacklin et al. do not disclose or suggest that each pedestal is configured in a rhombus shape.

The addition of Bower, Jr. does not cure the defects of Yamasaki et al. and Blacklin et al. Bower, Jr. allegedly relates to a continuous-casting mold with thin walled copper liner. The Office Action limits the use of Bower, Jr. to allegedly providing friction-reducing polytetrafluoroethylene, graphite and molybdenum disulfide for the purpose of effectively reducing the coefficient of friction opposing relative movement between copper facing plates. Applicants respectfully submit that the Office Action does not allege and Bower, Jr. does not disclose or suggest a configuration where the pedestal is configured in a rhombus shape.

Applicants respectfully request withdrawal of the rejection to claims 16 and 17.

#### **VI. Rejection of Claims 20 to 22 Under 35 U.S.C. § 103(a)**

Claims 20 to 22 were rejected under 35 U.S. C. § 103(a) as being unpatentable over Yamasaki et al. in view of Blacklin et al. and further in view of U.S. Patent 4,688,320 (Ushio et al.) and U.S. Patent 6,354,358 (Ishida). Applicants respectfully submit that the combination of references does not render obvious claims 20 to 22 for the following reasons.

Claims 20 to 22 depend from claim 1 and therefore include all of the features of amended claim 1.

As provided above, Yamasaki et al. and Blacklin et al. do not disclose or suggest that each pedestal is configured in a rhombus shape.

The addition of Ushio et al. and Ishida does not cure the defects of Yamasaki et al. and Blacklin et al. Ushio et al. allegedly relate to a method for producing dissimilar coatings for continuous casting molds. Ishida allegedly relates to continuous casting molds with tungsten alloy plating and method of producing the same. The Office Action does not allege and neither Ushio et al. or Ishida disclose a configuration where a pedestal is configured in a rhombus shape.

Applicants respectfully request withdrawal of the rejection to claims 20 to 22.

**VII. Conclusion**

It is respectfully submitted that all pending claims are allowable. All issues raised by the Examiner having been addressed, an early and favorable action on the merits is earnestly solicited.

Respectfully submitted,

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